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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/986,868	11/13/2001	Kojiro Hamabe	Q67209	6035

7590 07/21/2005

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EXAMINER

JAIN, RAJ K

ART UNIT	PAPER NUMBER
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2664

DATE MAILED: 07/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/986,868

Applicant(s)

HAMABE ET AL.

Examiner

Raj Jain

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>vary</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-22 examined on the merits.

Specification

The abstract of the disclosure is objected to because of undue length. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 5-8, 11-13, and 15-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Petersson (US006567670B1).

Regarding claims 1 and 11, Petersson discloses a method, apparatus and means for RF quality measurement within a network control means of a communication system (see abstract and Figs 1-3), the quality control means is comprised of;

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-step for receiving a signal transmitted from a communication counterpart station (see abstract, Figs. 1-3, 7, col 2 lines 7-35, col 13 lines 31-45, the mobile station (MS) receives a signal transmitted from the base station (BTS));

- step for measuring a reception quality value of each received time slot (see Figs, 5a-d, col 5 lines 44-54, within a TDD/CDMA system reception quality of received signal is measured per slot using SIR, SNR or other signal interference measurement criteria's);

- control instruction determining step for periodically determining a control instruction depending upon said reception quality values of said plurality of slots (see col 5 lines 44-62, the control instruction is determined based on control parameter TPC which is measured against predetermined SIR value levels. In CDMA technology, the transmission power control is essential which controls the transmission power so that a received SIR (signal to interference ratio) measured on the receiving side matches a predetermined target SIR in response to results obtained by comparing the two values. In this technique, the SIR of a received signal is measured slot by slot and compared with the target SIR, the slot being defined as a section in a received signal sandwiched by two successive pilot signals of a known pattern which are transmitted periodically).;

- and transmission step for transmitting said control instruction to said counterpart station, whereby said control instruction being used for transmission power control of said counterpart station (see col 5 lines 44-62, col 13 lines 32-47, the transmission for power control is set within upped and lower threshold limits and

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incremental step values are sent as commands to the mobile station to either increase or decrease its power based on SIR measurements received on the uplink).

Regarding claims 2 and 12, Petersson discloses power control instructions are performed per time slot (see Figs. 5a-d, col 5 lines 44-54, within a TDD/CDMA system reception quality of received signal is measured per slot using SIR, SNR or other signal interference measurement criteria's).

Regarding claims 3 & 13, Petersson discloses within the prior art (see Figs 3-1, 4-1) each frame forms a time slot group consisting of number of timeslots based on the air interface technology used (i.e. TDMA, CDMA, TDD/CDMA, etc.). The group or frame value is used to adjust the power in the next time interval (see col 5 lines 19-30).

Regarding claims 5, 6, 15, and 16 Petersson discloses reception values ranges and appropriate steps for increase of power increments (see col 5 lines 44-67, col 13 lines 32-47, the values of "X" are user defined, i.e. the lower threshold value for "x" may be "0" and upper threshold value may be set for "100", thus any arbitrary values may be defined as appropriate. The error control part may be FER, BLER, etc as desired.)

Regarding claims 7, 8, 17 & 18, Petersson discloses power control instructions determined by the RNC based on received SIR measurement values from the mobile station, (see col 5 lines 44-62, col 13 lines 32-47, the transmission for power control is set within upper and lower threshold limits and incremental step values are sent as commands to the mobile station to either increase or decrease its power based on SIR measurements received on the uplink).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 9, 10, 14, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Petersson (US006567670B1) as applied to claims 1 and 11 above, and further in view of Janky et al.

Petersson discloses a method, apparatus and means for RF quality measurement within a network control means of a communication system (see abstract and Figs 1-3), the quality control means is comprised of;

- step for receiving a signal transmitted from a communication counterpart station (see abstract, Figs. 1-3, 7, col 2 lines 7-35, col 13 lines 31-45, the mobile station (MS) receives a signal transmitted from the base station (BTS));

- step for measuring a reception quality value of each received time slot (see Figs, 5a-d, col 5 lines 44-54, within a TDD/CDMA system reception quality of received signal is measured per slot using SIR, SNR or other signal interference measurement criteria's);

- control instruction determining step for periodically determining a control instruction depending upon said reception quality values of said plurality of slots (see col 5 lines 44-62, the control instruction is determined based on control parameter TPC which is measured against predetermined SIR value levels. In CDMA technology, the

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transmission power control is essential which controls the transmission power so that a received SIR (signal to interference ratio) measured on the receiving side matches a predetermined target SIR in response to results obtained by comparing the two values. In this technique, the SIR of a received signal is measured slot by slot and compared with the target SIR, the slot being defined as a section in a received signal sandwiched by two successive pilot signals of a known pattern which are transmitted periodically).;

- and transmission step for transmitting said control instruction to said counterpart station, whereby said control instruction being used for transmission power control of said counterpart station (see col 5 lines 44-62, col 13 lines 32-47, the transmission for power control is set within upper and lower threshold limits and incremental step values are sent as commands to the mobile station to either increase or decrease its power based on SIR measurements received on the uplink).

Petersson further discloses reception values ranges and appropriate steps for increasing or decreasing of power increments (see col 5 lines 44-67, col 13 lines 32-47, the values of "X" are user defined, i.e. the lower threshold value for "x" may be "0" and upper threshold value may be set for "100", thus any arbitrary values may be defined as appropriate).

Petersson fails to disclose error correction coding for information bit within the transmitted signal and interleaving the time slots into one block.

Janky discloses error correction coding for information bit within the transmitted signal and interleaving the time slots into one block (see col 7 lines 32-52, col 11 lines 29-45). Error correction is provided to enhance and protect the voice and data prior to

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and/or after transmission to designated site based on where the error processing is located. Interleaving incorporates all slots into one frame for transmission thereby saving time and improving efficiency of transmission by transmitting grouped frames as opposed to individual time slots.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made include error correction coding and interleaving within Petersson so as to improve the quality and integrity of the transmitted data as well as improving overall network efficiency by interleaving individual time slots prior to transmission.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raj Jain whose telephone number is 571-272-3145.

The examiner can normally be reached on M-F.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 571-272-3134. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2600.

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RJ
July 18, 2005